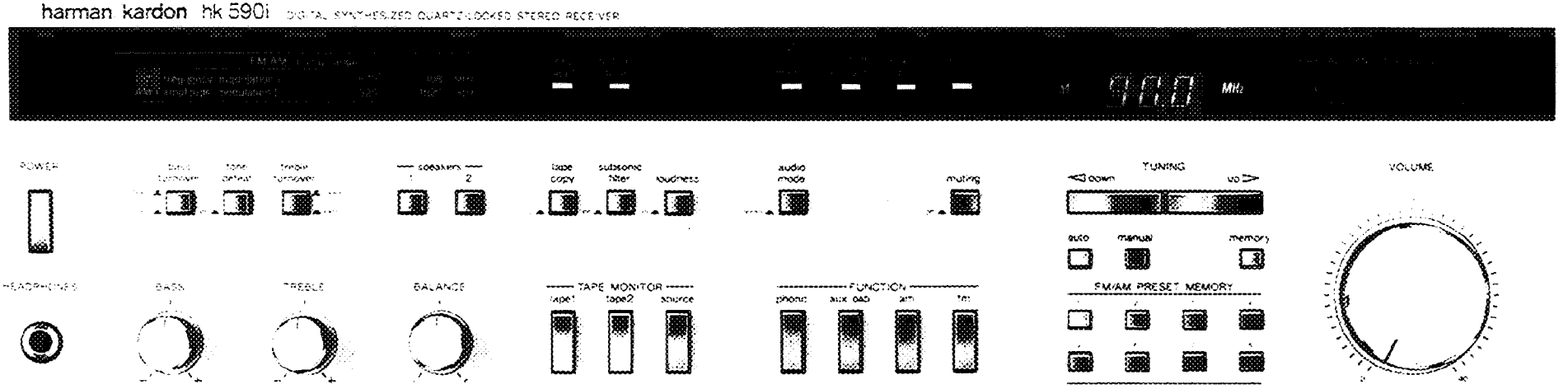
owner's manual

hk590i

harman/kardon
DIGITAL SYNTHESIZED
QUARTZ-LOCKED
STEREO RECEIVER



SPECIFICATIONS

Congratulations on your purchase of the Harman Kardon hk590i Digital Synthesized Quartz-locked Stereo Receiver.

In order to appreciate the full performance of this sophisticated unit, please be sure to read this owner's manual and use your receiver only in accordance with its instructions. Keep it in safe place for future reference.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

Audio Section

Power Output, RMS (both channel driven into 8 Ohms, 20Hz – 20kHz)	: 45 watts per channel @ less than 0.08% THD
HCC (high instantaneous current capability)	: 35A
Power Bandwidth (at half rated output into 8 Ohms)	: 10Hz – 100,000Hz
Frequency Response (+0, –3dB)	: 1Hz – 120,000Hz
Signal to Noise Ratio, "A" WTD	
Phono	: 80dB
Aux/DAD	: 82dB
Input Sensitivity/Impedance	
Phono	: 2.2mV/47k Ohms
Aux/DAD	: 130mV/25k Ohms
Tone Control Characteristics	
Bass Turnover Frequency	: 200Hz/400Hz
Treble Turnover Frequency	: 2kHz/6kHz
Loudness Control (–40dB Position) at 50Hz/at 10kHz	: 10dB/3dB
Filter	
Subsonic	: 15Hz, 6dB/Octave

Tuner Section

Usable FM Sensitivity (Mono)	: 10.8dBf (1.9μV)
50dB Quieting Sensitivity	
Mono	: 15.1dBf (3.1μV)
Stereo	: 36.6dBf (37μV)
Alternate Channel Selectivity	: 68dB
Stereo Separation (1kHz)	: 48dB
FM THD (1kHz, 100% modulation) Mono/Stereo	: 0.08%/0.1%
AM Sensitivity (external antenna)	: 17μV

General

Dimensions (W x H x D) (with legs, knobs, antenna)	: 17-7/16" x 5-1/4" x 14-3/8" (443 x 134 x 365mm)
Weight	: 17lbs.10oz. (8kg)
Power Supply	: AC 120V, 60Hz
Power Consumption	: 310W

■ High Instantaneous Current Capability (HCC)

The power amplifier is capable of driving as much as 35 amperes of instantaneous signal current into a low impedance or reactive speaker load. This maintains the hk590i's high degree of sound quality even at high power levels.

■ Low Negative Feedback

Negative feedback is kept to a minimum in the phono, preamplifier and power amplifier sections. This provides exceptional transient response and low dynamic distortion.

■ Ultrawideband Response

In order to maintain phase linearity, the frequency response of this unit greatly exceeds the audio range at both the upper and lower limits.

■ Exceptional FM Audio Sound Quality

In addition to high sensitivity and excellent interference rejection, the tuner section was designed to provide low distortion, low noise and excellent stereo separation.

■ Digital Synthesized Quartz-locked Tuning

Quartz-locked tuning accuracy eliminates drifting and mistuning, thereby guarantying optimum sound quality. Eight AM and eight FM stations can be simultaneously stored in the memory. They will remain for three weeks even if there is a loss of power.

■ Constructed for Audio Purity

The internal wiring, layout and materials have been chosen to minimize noise, hum and interaction of the various circuits.

■ Tape Copy Switch

This switch allows you to dub from the tape deck connected to the TAPE 1 terminals to the tape deck connected to the TAPE 2 terminals, while listening to another source such as phono, aux/DAD, FM or AM.

■ Tone Defeat Switch

The tone defeat switch provides the ability to bypass the bass and treble circuitry. This assures flat frequency response and also simplifies the audio signal path, providing the best possible sound quality.

■ Bass and Treble Turnover Selectors

This feature alters the range of adjustment provided by the bass and treble controls. The user can more precisely contour the tone controls to match the speaker systems and room acoustics.

Always Use at 120V AC

This unit is designed for operation with 120V AC. Connect only to domestic AC outlets. Never connect the unit to an outlet supplying a higher voltage. This may create a fire hazard.

Handle the Power Cord Gently

- Do not disconnect the plug from the AC outlet by pulling the cord; always pull the plug itself. Pulling the cord may break the wire.
- If you do not intend to use your unit for any considerable length of time, disconnect the plug from the AC outlet.
- Do not place furniture or other heavy objects on the cord, and try to avoid dropping heavy objects on it. Also do not make a knot in the power cord. Not only may the cord be damaged, it can also cause a short circuit and a consequent fire hazard.

Place of Installation

Place your unit on a firm and level surface. Avoid installing your unit under the following conditions:

- ▶Moist or humid places.
- ▶Places exposed to direct sunlight or close to heating equipment.
- ▶Extremely cold locations such as those in the direct draft from an air conditioner.
- ▶Places subject to excessive vibration or dust.
- ▶Poorly ventilated places.

Do not cover the ventilation slots on the top of the unit. This will cause the temperature inside the unit to rise, which can eventually effect the reliability of your unit.

Moving the Unit

Before moving the unit, be sure to unplug the power cord from the AC outlet and disconnect the interconnection cords to other units.

Do Not Open the Cabinet

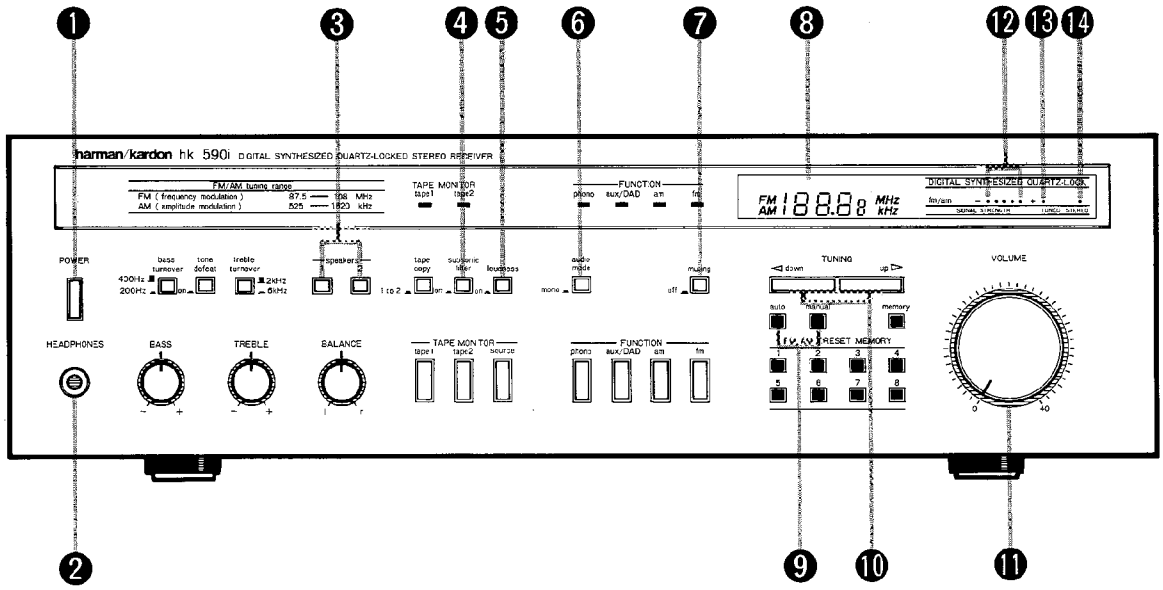
To prevent fire or shock hazard, do not tamper with internal components for inspection or maintenance. Harman Kardon does not guarantee against performance degradation resulting from any modification.

If water, a hairpin or wire accidentally enters the unit, immediately unplug the power cord from the AC outlet to prevent shock and consult an authorized Harman Kardon service station. If you use the unit under this condition, it may cause a fire or shock hazard.

Cleaning

When the unit gets dirty, wipe it with a soft dry cloth. If necessary, wipe it with a soft cloth soaked with mild soapy water and then wipe with a dry cloth.

Never use benzine, thinner, alcohol or other volatile agent, and avoid spraying an insecticide near the unit.



❶ POWER SWITCH (POWER)
Pressing this switch will turn on the power and the front panel will illuminate. Press the switch again to turn the power off.

❷ HEADPHONE JACK (HEADPHONES)
Stereo headphones with a standard 1/4 inch plug can be connected to this jack. When both SPEAKER selectors (1 and 2) are in the OFF position (buttons out), sound can still be obtained via the headphone jack.

❸ SPEAKER SELECTORS (speakers)
One or two speaker systems can be connected to this unit. Depress the selector switch (1 or 2) corresponding to the system to which you want to listen. To use both speaker systems, depress both switches. Press down the switches once again if the use of the speaker systems are not desired.

❹ SUBSONIC FILTER SWITCH (subsonic filter)
When playing the turntable, this filter switch is used to cut off super-low tones, which may excessively vibrate the speaker cones.

❺ LOUDNESS SWITCH (loudness)
When listening at a low level, the loudness switch will create a more natural sound by emphasizing the low and high frequency ranges.

❻ AUDIO MODE SELECTOR (audio mode)
This selector is used to combine the left and right channel music signals. Usually it is set in the stereo position (button out). If the FM stereo broadcast station you are listening to is weak and there is a lot of noise, set this switch to "mono." The two channels are combined into a monaural signal, but the noise is reduced for more comfortable listening.

❼ MUTING SWITCH (muting)
This switch eliminates irritating interstation noise when scanning for a station. To tune to a weak station, press this switch down to deactivate the muting function. This muting switch can be used for both FM and AM reception. The muting level can be controlled by the FM muting level adjusting control (MUTE ADJ.) on the rear panel. Turn it clockwise to increase or counterclockwise to decrease the muting level.

❽ STATION DISPLAY
This digital display indicates the band (AM or FM) and frequency of the tuned station.

❾ TUNING MODE SELECTOR (auto/manual)
Either an AUTO or MANUAL tuning mode can be selected. When the AUTO button is pressed, the button will illuminate in green and the unit will scan up or down to the next station when a TUNING button is pressed. When the MANUAL button is pressed, that button will illuminate in green and tuning can be made manually in small steps by pressing the TUNING buttons.

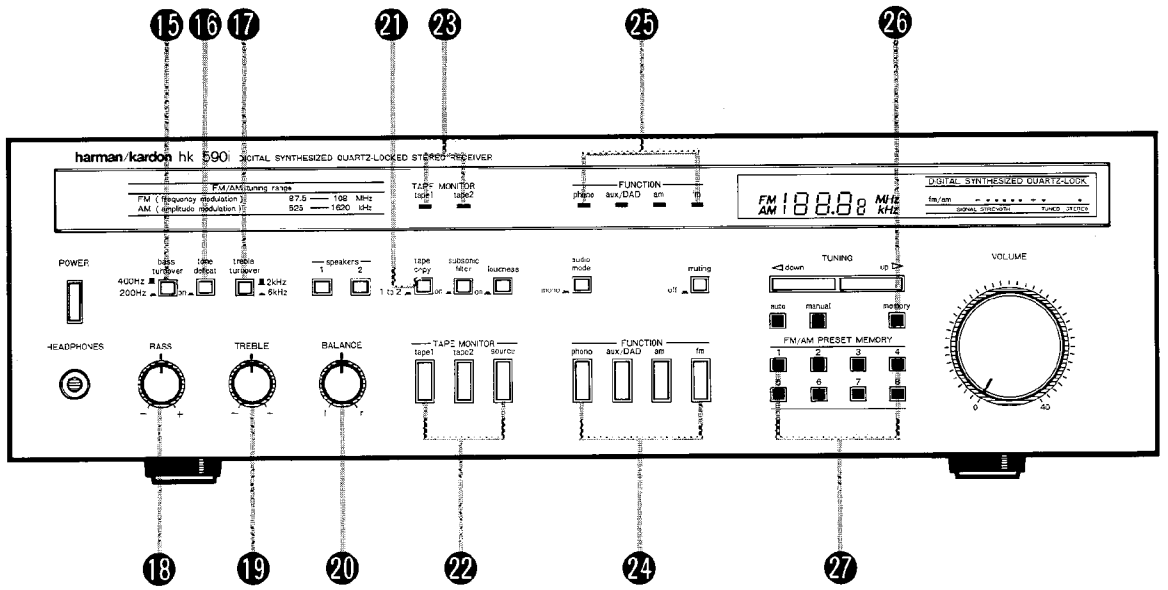
❿ TUNING BUTTONS (TUNING)
These buttons are used for tuning to the desired broadcast station.
down : When this button is pressed, the frequency will change to a lower frequency.
up : When this button is pressed, the frequency will change to a higher frequency.

⓫ VOLUME CONTROL KNOB (VOLUME)
This knob controls the sound level. Turning clockwise increases the sound volume, and turning counterclockwise decreases it. Set this knob at a minimum level before turning the power on or changing the sound source to protect the speakers from being damaged by a sudden high level sound.

⓬ SIGNAL INDICATOR (SIGNAL STRENGTH)
The relative level of the signal being received is displayed by this indicator. Tune up or down and adjust the antenna position for the highest possible indication.

⓭ TUNED INDICATOR (TUNED)
This indicator turns on when a broadcast station is correctly tuned in. It may not light up for a weak station, even when it is correctly tuned.

⓮ FM STEREO INDICATOR (STEREO)
This indicator is illuminated when an FM stereo broadcast is received.



⑮ BASS TURNOVER SELECTOR (bass turnover)

This switch selects the bass turnover frequency, which is the upper limit of the frequency range affected by the BASS control.

⑯ TONE DEFEAT SWITCH (tone defeat)

This switch bypasses the tone controls thereby assuring flat frequency response.

⑰ TREBLE TURNOVER SELECTOR (treble turnover)

This switch selects the treble turnover frequency, which is the lower limit of the frequency range affected by the TREBLE control.

⑱ BASS CONTROL KNOB (BASS)

This knob controls the low frequency sound level. Turn it clockwise to boost or counterclockwise to reduce the low frequency level.

⑲ TREBLE CONTROL KNOB (TREBLE)

This knob controls the high frequency sound level. Turn it clockwise to boost or counterclockwise to reduce the high frequency level.

⑳ BALANCE CONTROL KNOB (BALANCE)

This knob is used to balance the left and the right channels. Usually, it is set at the center. Turn it to the left or right to balance the sound if it seems unbalanced from the speakers or the headphones.

㉑ TAPE COPY SWITCH (tape copy)

When two tape decks are connected to the hk590i, this switch enables recording from tape deck 1 to tape deck 2 (tape dubbing).

㉒ TAPE MONITOR SELECTORS (TAPE MONITOR)

This switch is used when playing a tape or monitoring the sound while a tape is being recorded.

tape 1 : Press this switch to play the tape or monitor the recording on the tape deck connected to the TAPE 1 terminals on the rear panel. The TAPE MONITOR indicator (tape 1) will light up red.

tape 2 : Press this switch to play the tape or monitor the recording on the tape deck connected to the TAPE 2 terminals on the rear panel. The TAPE MONITOR indicator (tape 2) will light up red.

source : Press this switch to listen to a program source other than a tape.

㉓ TAPE MONITOR INDICATOR (TAPE MONITOR)

This indicator illuminates when the TAPE MONITOR selector (tape 1 or tape 2) is pressed.

㉔ FUNCTION SELECTOR (FUNCTION)

These buttons are used to select a program source other than a tape deck.

phono : Press this switch to listen to a record (disc) played on the turntable.

aux/DAD : Press this switch to listen to the sound from a compact disc player, TV tuner or other component connected to the AUX/DAD input terminals.

am : Press this switch to listen to an AM broadcast.

fm : Press this switch to listen to an FM broadcast.

㉕ FUNCTION INDICATORS (FUNCTION)

Each FUNCTION indicator illuminates in green corresponding to the setting of the FUNCTION selector switch.

㉖ MEMORY BUTTON (memory)

This button is used to enter or change the preset broadcast stations. When this switch is pressed, it will illuminate in green for about 10 seconds. This indicates the preset memory standby state.

NOTE: If you do not press a PRESET MEMORY button while the MEMORY button is illuminated, memory presetting can not be made.

㉗ PRESET MEMORY BUTTON (FM/AM PRESET MEMORY)

Press any one of the eight PRESET MEMORY buttons while the MEMORY button is illuminated in green, and the frequency indicated by the STATION DISPLAY is memorized at that PRESET MEMORY button. Each position can memorize one frequency in both the FM and AM bands, for a total capability of sixteen stations being preset in the memory. Once a station frequency is memorized, it can be recalled any time the same button is pressed. When the PRESET MEMORY button is pressed, it illuminates in green, indicating the button is in use.

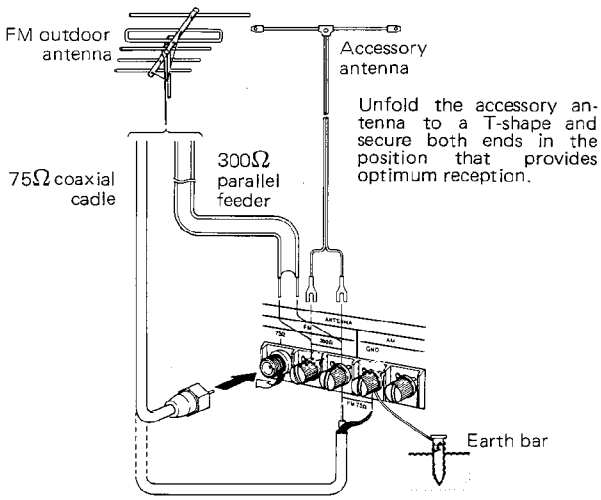
ANTENNAS

FM Antenna

If experiencing poor FM reception while using the accessory antenna, the use of an outdoor antenna exclusively for FM reception is likely to improve FM reception.

The connecting wire between the antenna and the antenna input terminal is called a feeder. Most feeders are 300Ω parallel or 75Ω coaxial cables. We recommend type 3C-2V or 5C-2V 75Ω coaxial cable to be used with this unit to enable it to perform to its fullest capacity. The coaxial cable has a stronger resistance against loss and interference compared to a parallel feeder.

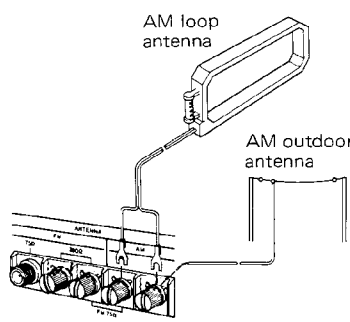
If there is a lot of noise while receiving an FM broadcast, we recommend that you make a ground connection. Connect one end of a thick wire to the antenna GND terminal and wind the other end around an earth bar or earth plate and drive it into the ground.
CAUTION: Never make a connection to a gas pipe because it may cause fire hazard.


FM outdoor antenna
Accessory antenna
Unfold the accessory antenna to a T-shape and secure both ends in the position that provides optimum reception.
75Ω coaxial cadle
300Ω parallel feeder
Earth bar

AM Antenna

The AM loop antenna attached to this unit allows sufficient reception, except in an area where AM signals are weak. In a fringe area or inside a concrete building where the reception is weak and the sound quality is poor, an outdoor AM antenna is likely to improve reception.

Place the AM loop antenna as far away from this unit as possible without touching a metal object. The AM loop antenna is fitted to this unit by an antenna holder on the rear panel. To remove the AM loop antenna from the unit, simply pull it out of the holder.

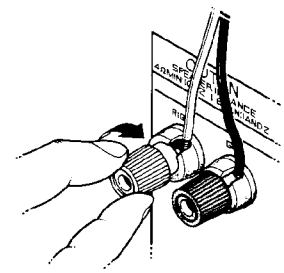


Connecting Speakers

Connect the speaker wires carefully to the speaker terminals on the rear panel so as not to mistake the left and the right channels or reverse the speaker polarities (+ and −).

Use sufficiently thick wire (18 gauge for short lengths, 16–12 gauge for longer lengths). It is recommended to use color-coded wire for easy polarity identification. Speaker wires should be as short as possible, and the left and the right channel wires should be the same length.

1. Remove about 3/4 inch (20mm) of insulation from the end of each wire and twist the strands of each end.
2. After making sure of the correct channel and polarity, loosen the speaker terminal knob and insert the conductor straight into the recess at the upper-right of the terminal. Tighten the terminal knob, and the end of speaker wire is wound automatically.



CAUTION: Two speaker systems can be connected to this unit. The minimum speaker impedance should be 4Ω when only one speaker system is connected. When two speaker systems are connected, care should be taken that net impedance does not become less than 4Ω.

Connecting Other Components

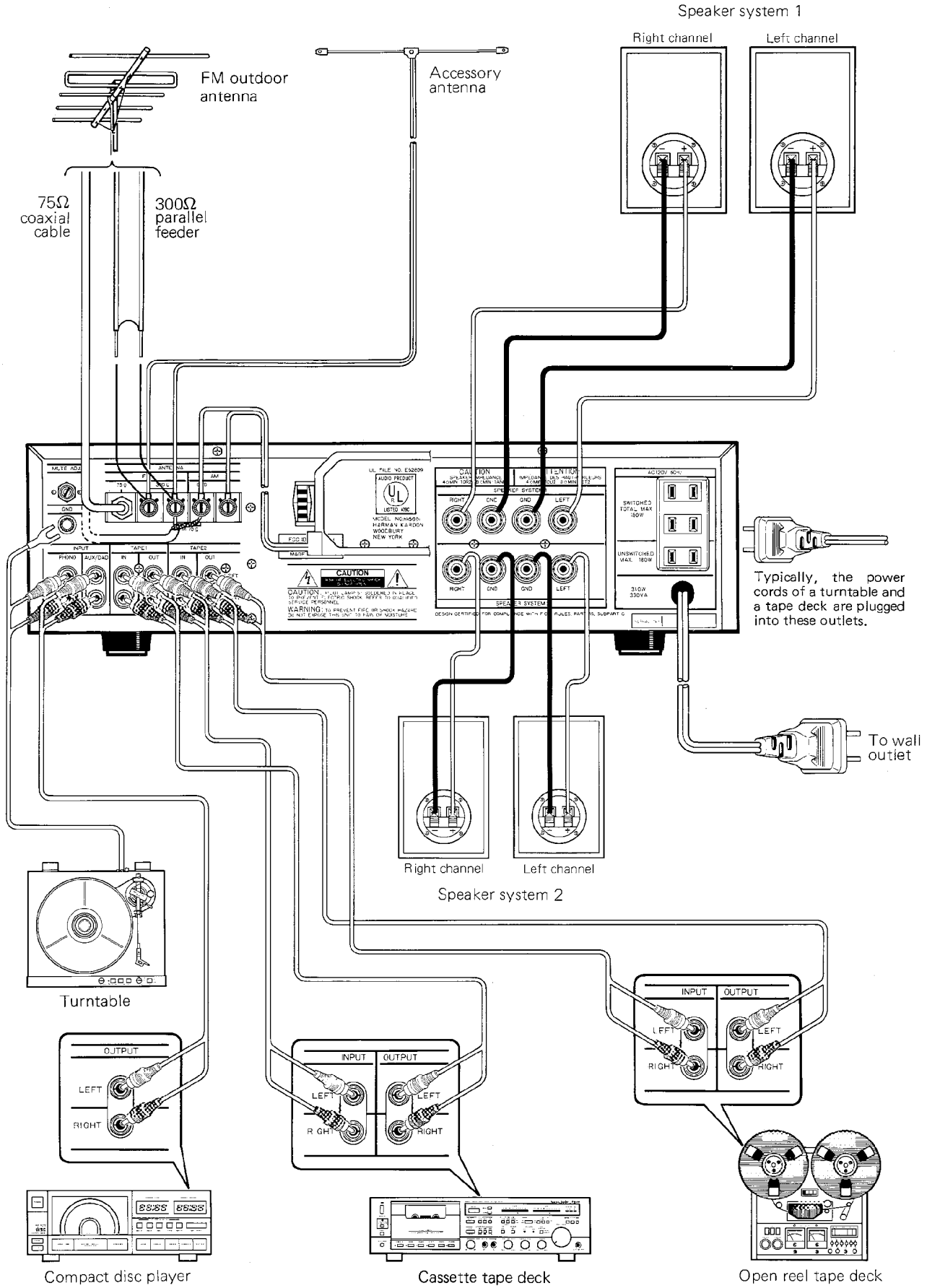
While you are connecting this unit to the rest of your high fidelity system, please unplug the power cord, disconnecting not only this unit but all the components, from the AC outlet.

Carefully connect the plugs to the left and right channel jacks. Push the plugs in all the way. Poor seating of the plugs tends to cause hum or intermittent sound and may damage the speakers.

Do not interwind the connection wires with the power cord. If interwound, the sound quality may be degraded.

The AC convenience outlets on the rear panel have a total capacity of 180 watts and can be used for turntable or tape decks. It is very dangerous to connect a component with a capacity for more than 180 watts. Read the manual or labels on the component to check its power consumption before connecting it to this unit.

SWITCHED: The power to this outlet is turned ON and OFF by this unit's power switch.
UNSWITCHED: The power to this outlet is independent of this unit's power switch.


Speaker system 1
Right channel
Left channel
FM outdoor antenna
Accessory antenna
75Ω coaxial cable
300Ω parallel feeder
Typically, the power cords of a turntable and a tape deck are plugged into these outlets.
To wall outlet
Right channel
Left channel
Speaker system 2
Turntable
OUTPUT
LEFT
RIGHT
INPUT
OUTPUT
Compact disc player
Cassette tape deck
Open reel tape deck

AM/FM RECEPTION

Automatic Tuning Method

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Press the SPEAKER selector switch for the desired speaker system(s).
3. Press the FM switch of the FUNCTION selector for FM reception or the AM switch of FUNCTION selector for AM reception. The FUNCTION indicator "fm" or "am" will light up and the STATION DISPLAY will indicate the FM or AM frequency.
4. Press the AUTO switch of the TUNING mode selector.
5. Press either the "down" or "up" TUNING button to start scanning the broadcast stations. To select a higher frequency than that indicated by the STATION DISPLAY, press the "up" button. To select a lower frequency, press the "down" button. The frequency changes until a broadcasted signal is tuned in, and the automatic scanning stops at that station. The SIGNAL STRENGTH indicator and TUNED indicator will light up. When an FM stereo broadcast is received, the STEREO indicator will also light up.
6. If the tuned frequency is not the desired broadcast station, press either the "up" or "down" button to resume automatic scanning. To scan rapidly without stopping at broadcast frequencies, continuously depress the "up" or "down" TUNING button. When the button is released, the next strong broadcast will automatically be tuned in.
7. In an area with poor signal strength, the muting circuit may eliminate a desired station. Depressing the MUTING switch will improve the reception sensitivity.
8. When the desired station is selected, adjust the VOLUME control and the BASS and TERBLE controls as desired.
9. Activate the TONE DEFEAT switch, TREBLE and BASS TURNOVER selectors, LOUDNESS switch, or AUDIO MODE selector as desired.

NOTE: When a broadcast is weak, automatic tuning to that frequency may not be possible. In this case, tune manually, as described in the following section.

Manual Tuning Method

Manual tuning is useful when the desired station is too weak to be picked up in the automatic tuning mode.

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Press the SPEAKER selector switch for the desired speaker system(s).
3. Press the FM switch of FUNCTION selector for FM reception or the AM switch of FUNCTION selector for AM reception.
4. Press the MANUAL switch of the TUNING mode selector.
5. Press the MUTING switch to the OFF position, since a signal too weak for auto tuning is also likely to be below the muting level.
6. Press the AUDIO MODE selector to the MONO position, since a signal too weak for auto tuning is also likely to be too weak for stereo separation.
7. Softly press either the "down" or "up" TUNING buttons to change the tuning frequency in small increments. The best tuning is obtained when many segments of the SIGNAL STRENGTH indicator and the TUNED indicator light up.
8. When the desired station is selected, adjust the VOLUME control knob and the BASS and TREBLE control knobs as desired.
9. Activate the TONE DEFEAT switch, TREBLE and BASS TURNOVER selectors, or LOUDNESS switch if necessary.

Preset Memory Tuning

This feature enables the selection of one of eight AM and eight FM broadcasts by simply pressing a PRESET MEMORY button. This eliminates the need for Auto or Manual Tuning. In order to use this feature, broadcast frequencies must first be entered into the PRESET MEMORY as follows:

1. Tune to the station to be memorized by using Auto or Manual Tuning.
2. Press the MEMORY button. It will illuminate in green. While this button is illuminated, press one of the PRESET MEMORY buttons numbered 1 through 8. The button pressed will illuminate in green and presetting of the station is completed.
3. To cancel a memorized station and memorize a new station at that number, tune to the frequency of the new station and follow step 2 above. The old station is automatically cleared, and the new station is memorized.

NOTE: Since this unit is provided with a memory backup circuit, the memory contents will remain stored after the power is turned off if the power cord is plugged into an AC outlet. The memory contents will remain stored for about three weeks when power cord is unplugged from an AC outlet. If the memory contents are cleared (erased), the presetting procedure must be performed again.

When the MEMORY button is pressed, the button illuminates in green for about 10 seconds. The memory function will only work while the MEMORY button is illuminated.

Last Station Memory Function

This function "remembers" the frequency last received before changing bands (FM/AM).

When changing the band from FM to AM and again to FM, the last received FM station will be tuned in.

This function also "remembers" the frequency of the station last received.

When the power is turned on, the frequency of the station last received is displayed by the STATION DISPLAY, regardless of whether the station is a preset one or not.

Tape Recording

Recording from a program source (FM/AM broadcast, turntable or a component connected to AUX/DAD input terminals) on a tape deck connected to the TAPE 1 and/or 2 terminals:

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Press the SPEAKER selector switch for the desired speaker system(s).
3. Select the desired program source with the FUNCTION selector. The FUNCTION indicator lights up to indicate the program source selected.
4. Press the SOURCE switch of the TAPE MONITOR selector.
5. Place the AUDIO MODE selector at the MONO or STEREO position according to the program source.
6. Start recording by activating the tape deck connected to TAPE 1 and/or 2 terminals. The source sound can be listened to from the speakers or headphone.
7. To monitor the sound being recorded, press the TAPE MONITOR selector to either TAPE 1 or TAPE 2 according to the tape deck being recorded. The TAPE MONITOR indicator will light up, indicating the monitoring state.

NOTE: Recording onto the tape deck is carried out directly from the program source without being influenced by the volume, balance and tone controls of this unit.

Tape Dubbing

Two tape decks can be connected to this unit and dubbing can be done from the tape deck connected to the TAPE 1 terminal to the tape deck connected to the TAPE 2 terminal.

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Press the SPEAKER selector switch for the desired speaker system(s).
3. Depress the TAPE COPY switch.
4. Place the AUDIO MODE selector in the MONO or STEREO position according to the program source.
5. After setting the tape deck connected to the TAPE 1 terminal for playback and the tape deck connected to TAPE 2 terminal for recording, dubbing will begin.
6. To monitor the sound of the tape being played, press the TAPE 1 switch of the TAPE MONITOR selector. Press the TAPE 2 switch of the TAPE MONITOR selector to monitor the sound of the tape being recorded.

NOTE: In order to listen to another program source during tape dubbing, press the SOURCE switch of the TAPE MONITOR selector and select the desired program source with the FUNCTION selectors.

Tape Playback

To play a tape:

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Press the SPEAKER selector switch for the desired speaker system(s).
3. Press TAPE 1 or TAPE 2 switch of the TAPE MONITOR selector and confirm that the "tape 1" or "tape 2" TAPE MONITOR indicator lights up.
4. Place the AUDIO MODE selector to the MONO or STEREO position according to the program source to be played back.
5. Insert a recorded tape in the tape deck and set the tape deck in the playback mode.
6. Advance the VOLUME control knob to a comfortable level and adjust the BASS and TREBLE control knobs as desired.
7. Activate the TONE DEFEAT switch, TREBLE and BASS TURNOVER selectors, or LOUDNESS switch if necessary.

Listening to a Record (Disc)

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Press the SPEAKER selector switch for the desired speaker system(s).
3. Press the PHONO switch of FUNCTION selector and make certain that the FUNCTION indicator "phono" lights up.
4. Activate your turntable and place the stylus on the record (disc).
5. Turn the VOLUME control knob clockwise to increase the sound volume to the desired level.
6. If the disc has a large warp, press the SUBSONIC FILTER switch to its ON position.
7. Adjust the BASS and TREBLE control knob to obtain the desired tone.
8. Activate the TONE DEFEAT switch, TREBLE and BASS TURNOVER selectors, LOUDNESS switch, or AUDIO MODE selector if necessary.

NOTE: If you hear a hum at average listening levels, turn the POWER switch off and check to see that the phono and the ground connections are secure. Depending on the cartridge type used, less hum may be created without the ground connection.

Listening to the AUX/DAD Input Source

To listen to a compact disc player, TV tuner or other auxiliary component:

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Press the SPEAKER selector switch for the desired speaker system(s).
3. Press the AUX/DAD switch of FUNCTION selector and make certain that the FUNCTION indicator "aux/DAD" lights up.
4. Activate the auxiliary component connected to the AUX/DAD input terminal.
5. Advance the VOLUME control knob to a comfortable level and adjust the BASS and TREBLE control knobs as desired.
6. Activate the TONE DEFEAT switch, TREBLE and BASS TURNOVER selectors, LOUDNESS switch, or AUDIO MODE selector if necessary.

Most of the problems are due to incorrect operation of this unit. If this unit does not operate as you intended, first check the items in the checklist. Also check other related components such as the speakers and other electrical equipment you use with this receiver.

Problem	Cause	Remedy
The front panel does not light up when the POWER switch is pressed.	●The power cord is not plugged in.	●Plug in the power cord securely.
The front panel lights up, but no sound is heard.	●The speaker wires are disconnected or breaking. ●The SPEAKER selector switches are set to the OFF position. ●The SOURCE switch of the TAPE MONITOR selector was not pressed. ●The FUNCTION selection was not made properly.	●Check the speaker wires and connect them correctly. ●Press the SPEAKER selector switch to the ON position. ●Press the SOURCE switch of the TAPE MONITOR selector. ●Press the FUNCTION selector of the program source to be heard.
The STATION DISPLAY displays the frequency, but no sound is heard.	●The speaker wires are disconnected or breaking. ●The displayed frequency does not carry a broadcast. ●The MUTING switch is set to the ON position and the broadcasting wave is weak.	●Check the speaker wires and connect them correctly. ●Tune to a broadcasted station. ●Press the MUTING switch to the OFF position.
FM sound has a large amount interference. The STEREO indicator or TUNED indicator flickers, without completely illuminating. Sound distorts and/or the volume level becomes low.	●Incorrect connection to the antenna. ●Poor location and/or direction of the antenna. ●Transmitting station is too far away. ●Multi-path distortion is being caused by the mutual interference of broadcast signals received directly from the transmitting station (direct waves) and signals being reflected from nearby buildings or mountains (reflected waves).	●Check the antenna connection wire and connect them correctly. ●Try changing the location, height and/or direction of the antenna. ●If an indoor antenna is being used, change to an outdoor antenna. ●Use a more directional antenna.
A strange hissing noise is produced continuously or intermittently.	●Caused by the "discharge phenomenon and the oscillation phenomen" of nearby electric appliances (such as fluorescent lights, TV, motors, etc.).	●Place this unit farther away from these types of electric appliances. ●Install noise-filters on the electric appliances.
Broadcasting cannot be preset.	●The PRESET MEMORY button is not pressed while the MEMORY button is illuminated.	●Press the PRESET MEMORY button while the MEMORY button is illuminating.
Station selection cannot be made by using the PRESET MEMORY button.	●The power cord is not plugged in for three weeks or more.	●Set the preset memory again.

TROUBLESHOOTING CHECKLIST

Problem	Cause	Remedy
Sound is not heard from the speaker system on one side.	●The connection of speaker wires are incorrect or incomplete. ●The wires to other equipment are disconnected. ●The BALANCE control knob is turned to either the extreme right or the left position.	●Check the speaker wires for disconnection or breaking and reconnect them correctly. ●Check the wires for disconnection and connect them correctly. ●Set the mark on the BALANCE control knob to the center position.
The tone controls are not functioning.	●The TONE DEFEAT switch is pressed.	●Press the TONE DEFEAT switch again (button out).
Sounds are not heard in stereo.	●The AUDIO MODE selector is set to the MONO position.	●Place the AUDIO MODE selector to the STEREO (button out) position.
When listening to stereo sound, the left and right sounds are reversed.	●The left and right speaker wires are reversed. ●The left and right wires connected to the other equipment are reversed.	●Check the speaker wires and connect them correctly. ●Check the wires to other equipment and connect them correctly.
When playing to a turntable, a low-pitched noise ("hum" or "buz") is heard.	●The ground connection cord of the turntable is disconnected. ●The connections of the turntable wires are incorrect or incomplete.	●Make the grounding connection correctly. ●Insert the turntable wire plugs firmly into the PHONO terminal of this unit.
When increasing the volume level while playing a turntable, an undesirable prolonged sound (howling) is heard.	●"Howling" is created by the speakers and turntable. ●Too much low frequency sound is present.	●Place the speakers further away from the turntable. ●Place the turntable on a more solid surface. ●Decrease the setting of the BASS control. Turn off the LOUDNESS switch. Turn on the SUBSONIC FILTER.
Sound quality is poor.	●Input components have not been set up correctly. ●Tone control is not proper.	●Check the antenna, cartridge of the turntable, or head of the tape deck, etc. and make corrections as needed. ●Adjust the BASS and TREBLE control knobs to obtain a desired tone.

Warranty and After-sale Service

- Please find the warranty card enclosed with this unit when you purchased it.
- After filling in the required items and reading the contents of the warranty card, keep it in a safe place.
- Warranty term is two years after purchasing.
- If this unit does not operate normally, first check this unit by yourself following the instructions provided in "Troubleshooting Checklist" in the manual.
- If a problem persists even though you have done as suggested in the checklist, consult your authorized Harman Kardon service station.
- Repair within the warranty term is made according to the prescriptions specified in the warranty card. For details, refer to the warranty card.